REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter that Applicant regards as the invention.

Claims 1, 7, 8 and 11 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for reciting "a terminal device having *no secure information concealing area.*" The Office action asserts that the specification does not define what the no secure information concealing area is and, therefore, the claimed invention is rendered unclear and indefinite. 35 U.S.C. 112, second paragraph, requires claim terms to have meanings that are discernable to one of ordinary skill in the art. A claim term is indefinite only if it remains insolubly ambiguous after all reasonable attempts at construction. See MPEP § 2173.02. The test for indefiniteness applied in the Office action, i.e., whether the claim term is defined in the specification, is improper. The MPEP states that a claim term that is not defined in the specification is not indefinite if the meaning of the claim term is discernable. *Id.* 35 U.S.C. 112, second paragraph, merely requires that claim terms be discernable and not insolubly ambiguous, and definition in the specification is not a requirement. In this case, the terms "no secure information concealing area" are discernable and are not insolubly ambiguous and, therefore, are not indefinite. When read in the context of the entire specification, one of ordinary skill in the art would readily understand the term "information" to be synonymous with data, and "concealing area" to mean a memory location for concealing the data. For example, at page 3, lines 7-11, the application discusses secret information within a secure device and refers to the secret information as "secret data" which can be held in a tamper resistant area that is securely constructed by hardware. The

application further states that a mobile terminal device 30 does not have an area in which the secret information can be stored securely (see page 3, lines 23-25). Applicant submits that the terms "no secure information concealing area" have a meaning that is readily discernable to one of ordinary skill in the art and are not insolubly ambiguous. Therefore, the rejections of claim 1, 7, 8 and 11 under 35 U.S.C. 112, second paragraph, are improper and should be withdrawn.

Claims 1-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over DeTreville in view of Barlow. Claim 1 recites, "a terminal device having no secure information concealing area." The Office action cites DeTreville's "open system" for teaching a terminal device having no secure information concealing area. As discussed above, the terms "no secure information concealing area" refer to the lack of a memory location for concealing secure data. The terms "open system" are clearly defined in DeTreville as a computer that is accessible to multiple individuals and/or other computers (some of which cannot be trusted with users' private information). See column 1, lines 40-43. DeTreville does not specify whether the open system computer has or lacks a memory location for concealing secure data. Applicant submits that the cited combination of references fails to teach, or otherwise render foreseeable, a terminal device having no secure information concealing area, as required by claim 1, and that claim 1 is allowable over the cited combination of references. The argument provided with respect to claim 1 is also applicable to claims 2-11.

Claim 8 recites, "an application execution runtime environment; an Operating System (OS) verifying and invoking the application execution runtime environment; and an application...executed by the application execution runtime environment...the fitted secure device authenticates the application execution runtime environment." The cited combination of references does not teach an application execution runtime environment that executes an

application and which is verified and invoked by a separate operating system. DeTreville teaches an operating system, but does not teach a separate application execution runtime environment. Because the cited combination fails to teach an application execution runtime environment, it necessarily fails to teach a secure device that authenticates the application execution runtime environment. For at least these reasons, claim 8 is allowable over DeTreville in view of Barlow.

Claim 11 recites, "wherein said terminal device includes applications, an application execution runtime environment for running and authenticating the applications requesting access to the secure device, and an Operating System (OS) verifying and invoking the application execution runtime environment...wherein the application execution runtime environment calculates digest data of said application and verifies an electronic signature attached to the application by using the digest data, and authenticates the application." The cited combination of references does not teach an application execution runtime environment for running and authenticating an application, in addition to an operating system that verifies and invokes the application execution runtime environment. Moreover, the cited combination of references does not teach the calculation of digest data of the application, and the verification of the application's electronic signature using the digest data, by an application execution runtime environment. DeTreville does teach a computer application that authenticates itself to a portable IC device (23:15-17). However, the cited combination of references is silent with respect to an application execution runtime environment calculating digest data of an application that it runs and verifying an electronic signature of the application using the calculated digest data. For at least these reasons, claim 11 is allowable over the cited combination of references.

Claim 2 recites, "an Operating System (OS) verifying and invoking said application running means, wherein said application running means is an application execution runtime environment." The cited combination of references does not teach an application running means that is an application execution runtime environment in addition to an operating system that verifies and invokes the application execution runtime environment. Claim 2 further recites, "wherein the application running means...presents...the application electronic signature to the secure device." The application running means of claim 2 is an application execution runtime environment. Therefore, claim 2 requires an application execution runtime environment that presents an application electronic signature to a secure device. DeTreville teaches a computer application that authenticates itself to a portable IC device by signing a received random number using a private key for the application (23:15-34). However the cited combination of references does not teach an application execution runtime environment that presents an application electronic signature to a secure device, as required by claim 2. For at least these reasons, claim 2 is allowable over the cited combination of references.

Claim 9 depends from claim 8 and is allowable for at least the reasons discussed above with respect to claim 8. Claim 8 recites, "wherein the application execution runtime environment calculates digest data of the application," and claim 9 recites, "wherein the application execution runtime environment verifies an electronic signature attached to the application by using the digest data, and authenticates the application." As discussed above with respect to claim 11, the cited combination of references does not teach the calculation of digest data of the application, and the verification of the application's electronic signature using the digest data, by an application execution runtime environment. DeTreville teaches a computer application that authenticates itself to a portable IC device (23:15-17). However, the cited

combination of references is silent with respect to an application execution runtime environment calculating digest data of an application that it runs and verifying an electronic signature of the application using the calculated digest data.

Claim 3 recites, "an Operating System (OS) verifying and invoking said application running means, wherein said application running means is an application execution runtime environment." The cited combination of references does not teach an application running means that is an application execution runtime environment in addition to an operating system that verifies and invokes the application execution runtime environment. Claim 3 further recites, "a database stored in the secure device, wherein the database includes predetermined digest data for authenticating a plurality of applications." The cited combination of references does not teach a secure device having a database including predetermined digest data for authenticating a plurality of applications. For at least these reasons, claim 3 is allowable over the cited combination of references.

Claim 10 depends from claim 8 and is allowable for at least the reasons discussed above with respect to claim 8.

Claim 4 depends from claim 3 and is allowable for at least the reasons discussed above with respect to claim 3. Claim 4 recites, "wherein the application running means encrypts the first information by using the digest data and sends out encrypted information to the secure device, and then wherein the secure device decrypts the encrypted information by using the digest data..." Claim 4 requires the encrypting and decrypting of information by using digest data. Applicant's attorney has thoroughly reviewed the cited combination of references and can find no teaching of the encrypting and subsequent decrypting of information using digest data, as required by claim 4.

Claim 5 recites, "an Operating System (OS) verifying and invoking said application running means, wherein said application running means is an application execution runtime environment." The cited combination of references does not teach an application running means that is an application execution runtime environment in addition to an operating system that verifies and invokes the application execution runtime environment. For at least this reason, claim 5 is allowable over the cited combination of references.

Claim 6 depends for claim 2 and is allowable for at least the reasons discussed above with respect to claim 2.

Claim 12 and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over DeTreville in view of Lee. Claims 12 and 13 both require an application execution runtime environment that verifies and executes an application, in addition to an operating system that verifies and invokes the application execution runtime environment. The cited combination of references does not teach an application execution runtime environment that executes an application and which is verified and invoked by a separate operating system. For at least these reasons, claims 12 and 13 are allowable over DeTreville in view of Lee.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. NGB-36483.

Respectfully submitted,
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